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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,661	02/06/2004	Brian Good	723-007	7520
27106	7590	10/10/2006	EXAMINER	
MELVIN I. STOLTZ, ESQ. 51 CHERRY STREET MILFORD, CT 06460			GUIDOTTI, LAURA COLE	
			ART UNIT	PAPER NUMBER
			1744	

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/773,661	GOOD, BRIAN
	<b>Examiner</b>	<b>Art Unit</b>
	Laura C. Guidotti	1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 30 August 2004.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-13, 17 and 20 is/are rejected.
- 7) Claim(s) 14-16, 18 and 19 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 06 February 2004 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>08302004</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|   | 6) <input type="checkbox"/> Other: _____ .                        |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "65" and "66" (Page 14 Line 7), "59" (Page 19 Line 15), "60" (Page 19 Line 17). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to because:

In the Paragraph on Page 15 starting on Line 5 refers specifically to Figure 3 and its discussion refers to several reference numerals that aren't actually shown in Figure 3 (21 housing, 20 cleaning system, 28 side panel, 24 cable).

Also, Figure 5 uses reference numerals "50" and "51" that are defined in the specification as being a "plate assembly" (50) and a "base" (51). However, after consideration of the disclosure and additional review of Figures 8-10 that also include

"50" and "51", it appears that reference numerals "50" and "51" are incorrect in Figure 5 as "50" and "51" do not appear to be showing a plate assembly or base.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the ball bearing assemblies (Claim 7), each of said gear members comprise a cover plate (Claim 8), a shaft/cable receiving portal formed in the housing (Claim 11) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

4. The disclosure is objected to because of the following informalities: Page 18 Line 7 there is a typographical error in that "ration" should be spelled "ratio".

Appropriate correction is required.

***Claim Objections***

5. Claims 1-20 are objected to because of the following informalities:  
Claim 1 recites the limitation "the desired axial movement" in Line 16. There is insufficient antecedent basis for this limitation in the claim.

Claim 9 Line 2, it is believed that "be" is meant to be "the".

Claim 10 recites the limitation "the equipment" in Line 3. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-7, 9-13, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Grimsley et al., US 5,636,403.

Grimsley et al. disclose the claimed invention including an elongated, continuous shaft/cable (48), a brush mounted to a first end of the elongated shaft/cable (10), a motor constructed for providing rotational output (16; Column 4 Lines 47-50; the output is 22), the rotational output being drivingly engaged with a plurality of gear members (see Figures 3-5; Column 4 Lines 47-50, Column 5 Lines 26-34; the gear members are 76 and 76', Column 5 Lines 60-64) and a coupling connected to the elongated shaft/cable for continuously rotating the shaft/cable (unlabeled, near "52" as shown in Figure 3; Column 5 Lines 17-25), a plurality of gear members rotationally mounted in juxtaposed, side to side relationship (the gear members are 76 and 76' on pinion and rollers 61 and 70a-70d, Figure 4) and cooperating to define a travel path for receiving a length of the shaft/cable and longitudinally driving the shaft/cable in either a forward

direction or a rearward direction (travel path is s-s' as shown in Figure 4; Column 5 Lines 45-48; motor is reversible and therefore is capable of driving the shaft/cable in both a forward and rearward direction, Column 5 Line 26), and a pinion gear (61; 76 or 76' on 61) is drivingly engaged with the rotational output of the motor (as shown in Figure 5) and interconnected with the plurality of gear members in order to achieve the desired axial movement of the shaft cable (Figures 4-5; Column 5 Lines 58-67), whereby controlled axial movement and rotational movement of the shaft/cable is capable of being attained in an efficient and controlled manner (via 90, 98). Regarding claim 2, the plurality of gear members comprise five separate and independent gear members (each roller, including pinion, 61 and 70a-70d having gears 76 or 76'), with three of the gear members being aligned in a first row (70b, 61, and 70c; Figure 4) and two of the gear members being aligned in a second, adjacent row (70a, 70d; Figure 4). Regarding claim 3, each of the gear members mounted in the second row are interconnected with the gear members mounted in the first row for rotationally driving at least two of the gear members (as shown in Figure 4 particularly by the directional arrows). Regarding claim 4, the pinion gear (61) is further defined as being mounted in driving engagement with the two gear members mounted in the second row (see Figure 4), whereby the rotational movement of the pinion gear imparts the driving force for rotating all of the gear members (see directional arrows in Figure 4; Column 6 Lines 1-3). Regarding claim 5, each gear member is rotationally mounted on a support shaft (72; Column 5 Lines 58-60) with each of the support shafts being mounted to a support plate (68 or 75) inherently in a juxtaposed, spaced, aligned relationship with each other

(not shown; Column 5 Lines 58-60). Regarding claim 6, each gear member further comprises a concave outer surface portion (as shown in Figure 5) constructed for receiving and controllably advancing the shaft/cable mounted therewith to provide a desired axial movement of the shaft/cable (Column 5 Lines 38-41). Regarding claim 7, each of the gear members comprises ball bearing assemblies (one is shown in Figure 5; Column 5 Lines 58-60), with the ball bearing assemblies constructed and mounted on a support shaft (see Figure 5). Regarding claim 9, there is a handle (14, 90) mounted to a second end of the shaft/cable (Figure 1) capable of enabling an operator to position the brush and rotating the shaft/cable where desired (Column 4 Lines 44-47; Column 7 Line 47 to Column 8 Line 3), the handle further comprising control means for selecting the directional movement of the shaft/cable (such as a pneumatic control system, Column 7 Lines 24-40). Regarding claim 10, the system further comprises a housing that retains the motor, gear assembly, and “associated” electronics (24; Figures 1 and 3) and includes wheels (30) capable of enabling equipment to be easily transported.

Regarding claim 11, the system further includes a shaft/cable receiving portal formed in the housing (at 77) in cooperating alignment with the travel path formed by the gear members (see Figure 4). Regarding claim 12, the system further comprises a spring biased shaft/cable movement control assembly mounted to the receiving portal formed in the housing (80, Column 6 Lines 15-23). Regarding claim 13, the movement control assembly is further defined as comprising a first plate member and a second plate member (82, 84) mounted in a juxtaposed, spaced, cooperating alignment with each other (Figures 8a-8b), with each of the plate members incorporating a hole positioned in

axial alignment with each other for receiving and guiding the shaft/cable (see Figure 8a wherein the shaft/cable casing 50 is inserted within 82 and 84). Regarding claim 20, the system further includes electronic controls capable of enabling system start-up (Column 8 Lines 43-49).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grimsley et al., US 5,363,403 as applied to claim 7 in view of Van Ranst, US 2,981,373.

Grimsley discloses all elements mentioned above, however does not disclose that each of the gear members comprise a cover plate securely affixed to a terminating end thereof.

Van Ranst provides a teaching of providing each of a gear member (46, 58) in a system with a cover plate securely affixed to a terminating end thereof (80, 82; Figure 2) in order to seal the unit.

It would have been obvious for one of ordinary skill in the art to modify the gear members of Grimsley so that each of the gear members comprise a cover plate securely affixed to a terminating end thereof, as Van Ranst teaches, in order to seal each gear unit.

8. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grimsley et al., US 5,363,403 as applied to claim 1 in view of Ciaccio, US 3,025,547.

Grimsley discloses all elements mentioned above, however does not include a gear reducing assembly.

Ciaccio teaches a cleaning device that has a rotational output of the motor interconnected with a gear reducing assembly (93) capable of reducing the rotational speed of gear members relative to the rotational speed of the shaft/cable and to provide the correct speed of drive (Column 4 Lines 16-18).

It would have been obvious for one of ordinary skill in the art to modify the device of Grimsley and further include a gear reducing assembly, as Ciaccio teaches, so that speed coming from a motor device can be provided with a correct speed.

***Allowable Subject Matter***

9. Claims 14-16 and 18-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura C. Guidotti whose telephone number is (571) 272-1272. The examiner can normally be reached on Monday-Thursday, 7:30am - 5pm, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on (571) 272-1214. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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Patent Examiner  
Art Unit 1744

Icg